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# Workers' Compensation Program in the 1970's

by Daniel N. Price\*

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Workers' compensation has become a focus of public attention in the 1970's to a degree unprecedented in its 70-year history. Federal legislation, two national study groups, a rush of State reform amendments, and congressional hearings and bills proposing Federal standards have all contributed to the ferment of inquiry about the relevance and adequacy of the present system of State workers' compensation. Among the questions raised are: Does the system cover all the workers that should be protected? Are the benefits provided adequate? And what are the cost implications to employers of the changing program? For many years, the Social Security Administration has published estimates of the number of workers covered, the benefits paid, and the costs of workers' compensation. This article provides benchmark data to bring coverage and benefit estimates up to date and analyzes statutory provisions measuring several aspects of benefit adequacy.

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Newly developed estimates of coverage, benefits, and costs under workers' compensation programs place total coverage under such programs during 1976 at nearly 70 million persons, or about 88 percent of the average monthly number of wage and salary workers (including Federal employees) during the year. Payments under workers' compensation programs totaled \$7.6 billion, well over twice the annual amount being paid at the beginning of the decade. The total included \$5.2 billion of direct compensation payments and \$2.4 billion for medical and hospitalization payments.

The Social Security Administration has a direct and long-standing interest in workers' compensation programs. The provision of disability and survivor benefits by workers' compensation programs is important to the social security program in coordinating, preventing duplication, and planning changes in social security. Since 1965, social security payments to workers receiving both workers' compensation benefits and disabled-worker benefits under the social security program have been adjusted by the Social Security Administration through an offset provision. Coordination was also essential during the period (1970-73) when most of the claim and payment activity under the Federal "black lung" bene-

fits program was the responsibility of the Social Security Administration. (Claims since the end of 1973 have been under the jurisdiction of the U.S. Department of Labor.)

Largely because of this interest, the Social Security Administration has published at regular intervals a series of estimates on the number of workers covered, benefits paid, and the costs of workers' compensation. This article provides new benchmark data for coverage and benefit estimates, and examines statutory provisions concerning benefit adequacy.

## Brief History of Program

In 1908, the first workers' compensation program covering certain Federal civilian employees in hazardous work was enacted. Similar laws were passed in 1911 in some States for workers in private industry, but it was not until 1949 that all States had established programs to furnish income-maintenance protection to workers in the event of disability from work-related injury or illness. For the next several decades, State laws were improved by expanding coverage, raising benefits, and liberalizing eligibility requirements and by increasing the scope of protection in other ways.

On December 30, 1969, the Federal Coal Mine Health and Safety Act established a Federal program of cash

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benefit payments to coal miners and their widows for disability or death from pneumoconiosis (black lung disease—a disease contracted from working in and around coal mines). This important law was originally intended as temporary remedial legislation and was subsequently amended to return the responsibility for paying black lung benefits to the State workers' compensation programs and employers. Perhaps most noteworthy in the Federal Coal Mine Health and Safety Act was the assumption by the Federal Government of responsibility for a program relating to a specific occupational disease—previously excluded from coverage under State workers' compensation programs—and the mandating of future coverage by the employer or the State programs for the particular disease.

The year after the black lung benefits program was enacted the Occupational Safety and Health Act was passed. This law established a national program to secure the safety of the workplace and created the National Commission on State Workmen's Compensation Laws to evaluate current programs and make recommendations for improvements. The Commission's report in 1972 found that the programs were inadequate; it included a large number of recommendations—19 of them were deemed essential to make workers' compensation a modern, effective system. Using these recommendations as guidelines, States have made many changes in their workers' compensation programs. As a further consequence of the Commission's report, hearings were held at the Federal level and various bills were introduced in Congress proposing federally mandated changes in workers' compensation.

In 1974, the Interdepartmental Workers' Compensation Task Force took up some of the issues suggested by the National Commission.<sup>1</sup> The progress of States in meeting the essential recommendations of the Commission<sup>2</sup> was evaluated by the Task Force.

## Coverage

### Methodology

Data for measuring the status of workers' compensation programs are not as complete or as highly developed as those for other social insurance programs, despite their long history. The lack of data can be explained by a variety of factors. Each State program has its own provisions that may differ markedly from those of other States in scope of coverage and benefit pro-

visions. More important for availability of program statistics, State programs differ in administrative procedures and in the insurance mechanisms used to underwrite the risk of work injury.

Under most State programs, employers can establish the required workers' compensation protection for their employees by insuring with a commercial carrier or by self-insuring if they meet specified criteria for establishing proof of financial security. In addition, 18 States operate public insurance funds that employers may use as insurers. Only six of these funds are "exclusive"—that is, the law does not allow private companies to write workers' compensation policies. The States, then, are seldom the direct operators of the workers' compensation insurance program. As a result, they are not in a position to gather the data that are byproducts of other social insurance systems such as the social security program.

To fill this gap the Social Security Administration has developed a methodology over the years to estimate coverage and payrolls of State programs and to make State and national estimates of benefits and costs. In addition, key program indicators have been developed: The proportion of the potential labor force covered, the percentage of wage loss compensated in temporary total disability cases, the relation of benefits and premium costs to payrolls, and the proportion of premiums used for benefits and expenses. These indicators are used in the annual notes on workers' compensation published in the **Social Security Bulletin** and in the more comprehensive **Bulletin** articles appearing regularly at 4-year intervals.

One way of evaluating a national social insurance program like workers' compensation is to examine the number of workers protected by the program, especially in relation to the workforce. (See the historical series in table 1.) Since coverage data are not available from program operations as they are for social security and many other public income-maintenance programs, the Social Security Administration had to develop a methodology for estimating the number of covered workers.<sup>3</sup>

Information compiled by insurance companies and used as the basis for these coverage estimates is based on policy years that generally overlap calendar years, and it cannot be fully evaluated until the end of the policy year. A time lag in the availability of converted calendar-year data is thus inevitable. The Social Security Administration's estimating methodology provides benchmark estimates for workers covered in an average month in the latest full calendar year for which private carrier coverage estimates can be computed. The new

<sup>1</sup> See **Proceedings of the Interdepartmental Workers' Compensation Task Force Conference on Occupational Diseases and Workers' Compensation**, U.S. Congress, Joint Committee Print, 1976.

<sup>2</sup> See **Report of the Policy Group of the Interdepartmental Workers' Compensation Task Force**, January 1977.

<sup>3</sup> For a detailed description of the methodology and sources of data, see the **Bulletin**, July 1950, pages 4-5; August 1958, pages 4-6; and October 1970, page 5.

**Table 1.**—Estimated number of workers covered in an average month and total annual payroll in covered employment, selected years, 1940–76<sup>1</sup>

Year	Workers covered in an average month		Total payroll in covered employment	
	Number (in millions)	Percent of employed wage and salary workers <sup>2</sup>	Amount (in billions)	Percent of civilian wage and salary disbursements <sup>2</sup>
1940.....	24.2–25.0	70.8	\$35–36	72.1
1946.....	32.2–33.2	76.8	79–81	76.8
1948.....	35.6–36.3	77.0	104–106	79.9
1949.....	34.9–35.7	76.9	102–104	79.1
1950.....	36.5–37.2	77.2	112–115	80.1
1951.....	38.3–39.0	78.4	130–133	81.0
1952.....	39.1–39.7	78.9	140–143	81.0
1953.....	40.4–41.0	80.0	152–155	81.7
1954.....	39.5–40.0	79.7	152–154	82.0
1955.....	41.2–41.6	80.0	167–169	83.4
1956.....	42.8–43.1	80.2	181–182	83.2
1957.....	43.2–43.4	80.5	189–191	83.0
1958.....	42.4–42.6	80.2	191–193	83.4
1959.....	43.9–44.1	80.3	208–210	84.1
1960.....	44.8–45.0	80.4	219–221	84.1
1961.....	44.9–45.1	80.3	226–227	84.2
1962.....	46.1–46.3	80.4	240–242	84.0
1963.....	47.2–47.4	80.5	253–255	84.1
1964.....	48.6–48.9	80.8	271–273	84.0
1965.....	50.6–50.9	81.5	291–293	83.6
1966.....	53.5–53.8	83.1	320–322	83.8
1967.....	54.9–55.1	83.1	341–343	83.3
1968.....	56.7–56.9	83.8	375–377	83.4
1969.....	58.8–59.1	84.6	413–415	83.7
1970.....	59.0–59.3	83.9	440–442	83.9
1971.....	59.2–59.5	83.6	468–470	83.9
1972.....	62.1–62.5	84.7	511–513	83.7
1973.....	66.0–66.5	87.0	577–579	85.1
1974.....	67.8–68.2	87.5	635–639	85.9
1975.....	67.0–67.4	87.8	676–681	86.6
1976.....	69.3–69.9	87.7	747–753	86.4

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Midpoints of range used in computing percentages. Beginning 1967, employed wage and salary workers exclude those aged 14 and 15 (as well as younger workers) and includes certain workers previously classified as self-employed.

Source: Employed wage and salary workers from *Current Population Survey*, Bureau of Labor Statistics. Wage and salary disbursements from Bureau of Economic Analysis, Department of Commerce.

benchmark estimates presented here are for calendar year 1973 and reflect the usual 4-year update cycle. Once new benchmark figures are developed, coverage estimates are also made for years between benchmarks and for years beyond the benchmark period. In this article the employment trend data, adjusted by the estimated effects of legislative changes in coverage, are projected to provide national estimates of coverage for 1974–76, with individual State figures reported for 1976.

The coverage estimates are compiled by developing an estimated covered-payroll amount for each State and then converting this amount to the number of workers based on the relationship between payroll and the number of workers covered under unemployment insurance. In the few States where there are differences between the two programs in statutory size-of-firm coverage, an adjustment is made in the average wage to compensate for the typically lower average wage for employees in small firms.

The primary source of payroll data is the National Council on Compensation Insurance. For 1973, payroll data were reported by 11 competitive State funds and by private insurance companies in 44 States and the District of Columbia. Twenty years earlier, comparable data were available for only seven State funds and for private insurance companies in 40 States. The Social Security Administration converts these policy-year payroll figures into calendar-year payroll estimates and supplements them with payroll estimates for self-insurers and for other State funds. The latter figures are obtained from State administrative agencies and various other sources.

The end result of these procedures is an estimate of the average monthly number of workers covered by the workers' compensation program in each State. The estimated average monthly number of workers is, of course, much smaller than the total number of individuals covered at some time during the year. The estimates include all employees of firms that actually carry workers' compensation insurance or that submit the required financial proof of ability to self-insure, as well as employees of self-insured State and local government agencies, regardless of whether State law requires proof of financial security to self-insure. Employees of firms who voluntarily purchase workers' compensation insurance are also included, since they cannot be separated from those required to insure.

This method of estimating coverage has the advantage of being applicable to all States on a uniform basis. Not only are primary data compiled from national sources such as the National Council on Compensation Insurance and the unemployment insurance program, but the concept of coverage is applied uniformly in each State.

The State totals also include an estimate of workers covered by the Longshoremen's and Harbor Workers' Compensation Act, practically all of whom are insured by private carriers. The number of Federal workers covered under the Federal Employees' Compensation Act is estimated separately and not distributed among the States. The estimates exclude railroad workers in interstate commerce and seamen in the United States Merchant Marine, who are covered by statutory provisions for employer liability rather than by a workers' compensation law.

Benchmark coverage figures for 1973 and coverage projections through 1976 are shown, by State, in table 2. Differences in coverage levels from one period to another and the difference in levels from State to State are a composite of several factors such as statutory changes, labor-force trends, and variations in the quality of available data. More uniform, accurate data are now available. The National Council on Compensation Insurance payroll data now include more States than they did,

**Table 2.**—Estimated average monthly number of wage and salary workers covered by workers' compensation, 1973 and 1976

[In thousands]

State	1973	1976
Total.....	66,029-66,529	69,307-69,907
Alabama.....	790	865
Alaska.....	81	134
Arizona.....	570	635
Arkansas.....	475	535
California.....	7,300	7,830
Colorado.....	750-800	820-870
Connecticut.....	1,075	1,075
Delaware.....	185	190
District of Columbia.....	365	350
Florida.....	2,300-2,400	2,400-2,500
Georgia.....	1,315	1,000
Hawaii.....	275	295
Idaho.....	206	240
Illinois.....	3,970	4,060
Indiana.....	1,450-1,600	1,500-1,650
Iowa.....	900	1,000
Kansas.....	510	660
Kentucky.....	805	865
Louisiana.....	895	1,040
Maine.....	260	299
Maryland.....	1,075	1,100
Massachusetts.....	1,870	1,850-1,950
Michigan.....	2,780	2,780
Minnesota.....	1,200	1,280
Mississippi.....	485	510
Missouri.....	1,270	1,470
Montana.....	184	215
Nebraska.....	450-500	475-525
Nevada.....	215	255
New Hampshire.....	260	270
New Jersey.....	2,400	2,380
New Mexico.....	220	255
New York.....	6,070	5,780
North Carolina.....	1,500-1,600	1,650-1,750
North Dakota.....	144	170
Ohio.....	3,550	3,630
Oklahoma.....	500	555
Oregon.....	675-725	750-800
Pennsylvania.....	3,900	3,890
Rhode Island.....	265	270
South Carolina.....	750	840
South Dakota.....	146	161
Tennessee.....	1,025	1,100
Texas.....	2,790	3,180
Utah.....	325	370
Vermont.....	128	147
Virginia.....	1,420	1,540
Washington.....	1,050	1,160
West Virginia.....	505	540
Wisconsin.....	1,490	1,550
Wyoming.....	78	97
Federal employees <sup>1</sup> .....	2,832	2,854

<sup>1</sup> Excludes employment outside the United States.

and better estimating techniques are available for some States. Nevertheless, much of the available data, particularly for self-insurers, is indirect and in some instances incomplete. The 1973 estimates were sent to the State administrative agencies for review. Where the accuracy of final estimates was still uncertain, a range of values was used in table 2.

### Coverage Estimates

The new benchmark estimates for 1973 yield an average monthly number of covered persons of 66.0-

66.5 million. The covered payroll for these workers was \$577-579 billion (table 1). These estimates were less than 1 percent and 3 percent, respectively, above corresponding projections made earlier for 1973.<sup>4</sup> Projecting the current benchmark to 1976 produces an average of 69.3-69.9 million persons covered under workers' compensation and an accompanying total payroll of \$747-753 billion.

The roughly 69.6 million persons covered in 1976 represented 88 percent of the average monthly number of wage and salary workers during the year. Average monthly coverage was 10 million persons higher in 1976 than in 1970 and represented an additional 4 percent of total wage and salary workers. Both these figures are impressive, short-term gains for a program with as lengthy a history as workers' compensation that can be largely attributed to expansions in the coverage provisions of many State programs taking place between 1970 and 1975. After 1975, such legislative expansion efforts slowed dramatically.

Although the coverage projections through 1976 have been adjusted to reflect the effects of statutory extension of coverage, the coverage rates in table 1 flattened out after 1973. This situation may be partly attributable to a lag between new coverage enactments and effective coverage of these workers as reflected in the insured payroll and consequently in the coverage estimates. Small establishments, farms, and some other newly covered employers may need a transitional period before full compliance is achieved. The modest increase in the proportion of workers covered after 1973, despite the many extensions of coverage in the early 1970's, may also reflect a longer-term problem—the difficulty of assuring that marginal establishments do provide the insurance mandated by law.<sup>5</sup>

Two ways in which States extended coverage under their workers' compensation programs were by switching from elective to mandatory coverage and by eliminating "size-of-firm" restrictions. In 1968, 23 States permitted elective coverage and 24 States had size-of-firm coverage restrictions. By 1976 the number of States permitting elective coverage had dropped to three and the number with size-of-firm restrictions had fallen to 12. The number of States that provided some protection for farm workers rose from 21 at the end of 1968 to 33 by the end of 1976.

Despite these improvements, important gaps in 1976 in coverage under workers' compensation programs still exist. Three States still permitted elective coverage in 1978 and only one of 18 States without significant farm-

<sup>4</sup> See Daniel N. Price, "Workmen's Compensation Payments and Costs, 1973," *Social Security Bulletin*, January 1975, page 34.

<sup>5</sup> See John H. Lewis, *Coverage* (forthcoming report for the Interdepartmental Workers' Compensation Task Force), page 4.

worker coverage in 1976 had added these workers by 1978. Only two of the 12 States with size-of-firm restrictions reduced their list of exemptions but neither eliminated the restriction altogether. Furthermore, one State newly established an exemption for firms with fewer than three employees. Among the States with these restrictions, the mandating of workers' compensation was applicable in firms of two or more to six or more employees.

Protection for farm workers varied considerably because in addition to the total lack of protection in some States, only 11 of the 33 States that covered farm work did so on the same basis as for other covered employees. In the others, various exceptions—for farm employers with less than specified payrolls, for example, or for workers designated as seasonal or casual—limited the protection to differing degrees.

Similarly, although domestic workers had been covered under 23 programs by 1976, only one additional State covered a major part of this group by 1978. Perhaps the single largest group of workers still excluded from many State programs were the casual employees who work infrequently, irregularly, or in an incidental type of task for a given employer. According to a study as of December 1975, 3.7 million casual workers were outside the workers' compensation system.<sup>6</sup>

Even for employees of State and local governments, a lack of protection still exists, and indications are that in the past few years little progress has been made in this area. Information in the **Congressional Record** for May 11, 1978, shows that 22 States were not yet in compliance with the recommendations of the National Commission on State Workmen's Compensation Laws for coverage of government employees. These States were the same 22 that had comparably incomplete coverage of government workers in 1976.<sup>7</sup>

## State Variations in Coverage

The proportion of workers covered under workers' compensation laws in 1976 ranged from less than 61 percent to more than 96 percent. In almost one-half of the States the proportion of covered workers rose substantially from 1968 to 1976, a period characterized by an unusually high level of extension of coverage. Increases of at least five percentage points in the proportion of workers covered were recorded for 11 States

<sup>6</sup> *Ibid.*, page 9.

<sup>7</sup> Such evaluations may be a matter of judgment. **The Analysis of Workers' Compensation Laws** (U.S. Chamber of Commerce, 1976 Edition), reported a different list of States that "substantially" met the National Commission recommendations. All but seven of the States with incomplete State and local government coverage were evaluated in that report as being in substantial compliance.

from 1972 to 1976. In 13 other States the estimated proportion of covered workers went up at least five percentage points from the 1968 proportion.

As chart 1 shows, some fairly well-marked patterns in State coverage ratios are evident for 1976, when the ratios are arranged in three broad groups: Less than 70.0 percent, 70.0-84.9 percent, and 85.0 percent or more. The Pacific Coast, Northeastern, and Midwest-Great Lakes States tended to show ratios of 85.0 percent or more.

States in the southeastern quadrant of the country tended to have lower proportions of workers covered. Comparisons with data for earlier years show that significant gains have been made in coverage. Only five States remained in the less-than-70.0-percent group by 1976, compared with 11 States in 1972 and 15 States in 1968.

As chart 1 reveals, the large, higher-wage industrial States tended to provide the most extensive coverage, and the agricultural, lower-wage States tended to provide protection to a lower proportion of their workers. The following tabulation indicates a decided inverse

Percent covered	Number of jurisdictions		
	Total	With manufacturing wages below U.S. average	
		Number	Percent of total
Less than 70.....	5	4	80
70-84.....	19	12	63
85 or more.....	28	10	36

relationship between the level of production-worker weekly earnings in manufacturing (as of October 1976) and the proportion of workers covered by workers' compensation.

## Benefits

Workers' compensation provides cash and medical care benefits in the event of work-related disability. In 1976, these payments totaled \$7.6 billion, nearly four times the \$2.0 billion paid 10 years earlier (table 3). In the 10 years from 1956 to 1966, benefits rose at a more moderate pace: The 1966 total was just double the amount paid in 1956.

The program provides several types of benefits. Cash payments for temporary total disability and permanent total and partial disability, medical care benefits to disabled workers, and indemnity benefits to survivors of workers who died of employment-related causes.<sup>8</sup> As

<sup>8</sup> Benefits are also available to workers for rehabilitation (physical and vocational), not included in data reported here.

**Chart 1.**—Actual coverage as a percent of potential coverage, by jurisdiction, 1976

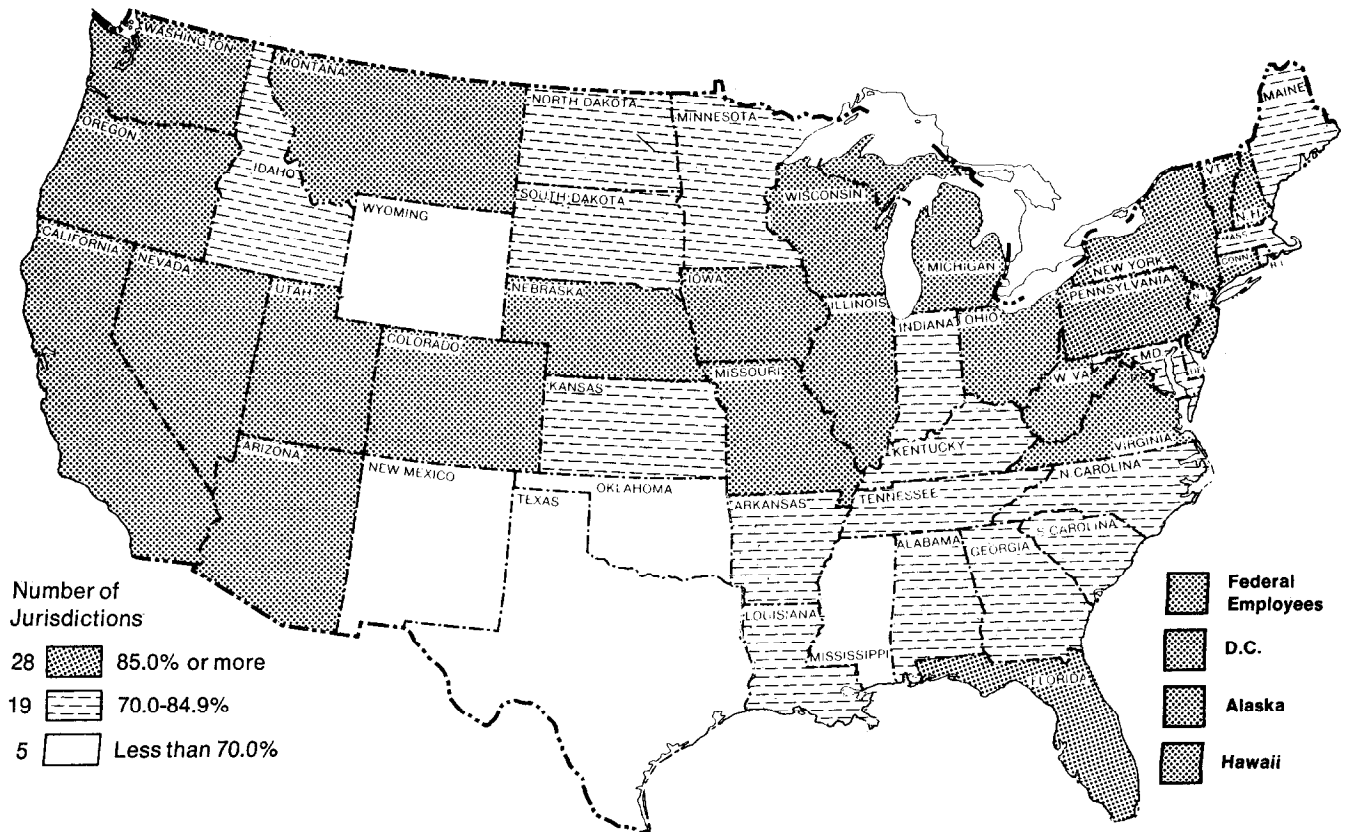


table 4 shows, \$5.2 billion or 69 percent of all workers' compensation benefits in 1976 were in the form of cash payments for disability (58 percent) or death (11 percent). The remaining 31 percent represented payments of medical and hospital costs.

The introduction of the Federal black lung program in 1970 altered the rather stable distribution of payments by type of benefit that existed earlier. Under the black lung program, only 0.2 percent of all payments in 1976 were paid for medical care, compared with an estimated 36 percent of the payments under workers' compensation programs. On the other hand, the black lung program has paid a disproportionate share of benefits to survivors: 39 percent in 1976, compared with 7 percent under the State programs.

The distribution of regular program benefits (excluding black lung benefits) was about the same in 1976 as in most earlier years. This finding is surprising in the light of substantial legislative liberalizations in cash-payment formulas in the early 1970's. Medical benefits were also liberalized during this period, but the number of States that made such changes was much smaller than the number changing the formula for cash benefits and the nature of the medical care improvements was more limited in scope and effect. It might have been expected, therefore, that cash benefits would have accounted for a greater proportion of the total by 1976. Evidently the rapid escalation of medical costs in recent

years balanced the growth in cash benefits to workers and their survivors.

The benefit protection afforded by workers' compensation can be provided through three different insuring mechanisms. Employers have the option of covering the risk by purchasing a policy with a private insurer (in all but six States), by purchasing a policy from a State-operated insurance fund (in 18 States), or by self-insuring (in all but four States). Table 3 shows that \$4.0 billion or 52 percent of the total was paid by private carriers, \$2.6 billion or 34 percent by State funds, and \$1.0 billion or 13 percent by self-insurers.

Historically, private insurance has accounted for a higher proportion than that indicated by the amounts shown in table 3 for recent years. From 1943 through 1970, private insurance benefits represented 60-63 percent of the yearly totals. State funds were responsible for 22-26 percent of the payments made during those years, and payments by self-insurers varied from 12 percent to 16 percent.

The change in these relationships during the 1970's has been caused by payments under the Federal black lung benefit program. If black lung payments are excluded, the historical benefit distribution among the different types of insurers remains fairly stable throughout the 1970's and is similar to that for earlier years. For 1976, the percentage distribution of benefits (excluding black lung benefits) was: Private insurance, 60

**Table 3.—Benefit payments, by type of insurance, 1939–76<sup>1</sup>**

[Amounts in thousands]

Year	Total		Type of insurance					
			Insurance losses paid by private insurance carriers <sup>2</sup>		State and Federal fund disbursements <sup>3</sup>		Self-insurance payments <sup>4</sup>	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1939	\$234,723	100.0	\$122,183	52.0	\$68,464	29.2	\$44,067	18.8
1940	255,653	100.0	134,653	52.7	72,528	28.4	48,472	18.9
1941	290,812	100.0	159,823	55.0	77,408	26.6	53,581	18.4
1942	328,669	100.0	190,239	57.9	81,247	24.7	57,183	17.4
1943	353,035	100.0	213,123	60.4	80,574	22.8	59,338	16.8
1944	385,236	100.0	236,655	61.4	85,990	22.3	62,591	16.3
1945	408,374	100.0	252,570	61.9	91,255	22.3	64,549	15.8
1946	434,232	100.0	269,799	62.1	96,053	22.1	68,380	15.8
1947	485,794	100.0	301,833	62.1	110,303	22.7	73,658	15.2
1948	533,584	100.0	334,699	62.7	120,989	22.7	77,896	14.6
1949	566,295	100.0	353,140	62.4	131,734	23.3	81,421	14.4
1950	614,702	100.0	381,329	62.0	148,693	24.2	84,680	13.8
1951	709,047	100.0	444,416	62.7	170,445	24.0	94,186	13.3
1952	784,956	100.0	490,958	62.5	193,107	24.6	100,891	12.9
1953	841,126	100.0	524,176	62.3	210,337	25.0	106,613	12.7
1954	876,216	100.0	540,497	61.7	225,473	25.7	110,246	12.6
1955	915,665	100.0	562,515	61.4	238,445	25.9	114,705	12.5
1956	1,002,007	100.0	618,109	61.7	259,074	25.9	124,824	12.4
1957	1,062,171	100.0	660,903	62.2	271,406	25.6	129,862	12.2
1958	1,111,599	100.0	649,402	62.5	284,780	25.6	132,417	11.9
1959	1,209,808	100.0	752,580	62.2	315,990	26.1	141,238	11.7
1960	1,294,945	100.0	809,921	62.5	324,580	25.1	160,444	12.4
1961	1,374,176	100.0	850,872	61.9	347,433	25.3	175,871	12.8
1962	1,488,816	100.0	923,989	62.1	370,722	24.9	194,105	13.0
1963	1,582,459	100.0	987,580	62.4	388,242	24.5	206,637	13.1
1964	1,707,189	100.0	1,069,577	62.7	411,876	24.1	225,736	13.2
1965	1,813,807	100.0	1,124,013	62.0	445,382	24.5	244,412	13.5
1966	2,000,316	100.0	1,239,120	61.9	486,167	24.3	275,029	13.8
1967	2,189,294	100.0	1,362,938	62.3	523,683	23.9	302,673	13.8
1968	2,375,988	100.0	1,481,606	62.4	556,340	23.4	338,042	14.2
1969	2,633,917	100.0	1,640,964	62.3	606,675	23.0	386,278	14.7
1970	3,030,603	100.0	1,843,264	60.8	754,892	24.9	432,447	14.3
1971	3,563,084	100.0	2,004,534	56.3	1,098,440	30.8	460,110	12.9
1972	4,061,419	100.0	2,178,617	53.6	1,379,206	34.0	503,596	12.4
1973	5,103,129	100.0	2,513,545	49.3	1,998,018	39.2	591,566	11.6
1974	5,780,993	100.0	2,970,811	51.4	2,086,015	36.1	724,167	12.5
1975	6,597,767	100.0	3,421,688	51.9	2,324,351	35.2	851,728	12.9
1976	7,585,662	100.0	3,975,784	52.4	2,591,227	34.2	1,018,651	13.4

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Net cash and medical benefits paid by private insurance carriers under standard workers' compensation policies. Data from the *Spectator: Insurance by States of Fire, Marine, Casualty, Surety and Miscellaneous Lines*; published and unpublished reports of State insurance commissions; and A. M. Best Co.

<sup>3</sup> Net cash and medical benefits paid by competitive and exclusive State funds and the Federal systems. Beginning 1970, includes Federal black lung benefits. Includes payment of supplemental pensions from

general funds. Compiled from State reports (published and unpublished) and from the *Spectator* and the *Argus Casualty and Surety Chart* (annual issues) and other insurance publications. For some funds, data for fiscal years.

<sup>4</sup> Cash and medical benefits paid by self-insurers, plus the value of medical benefits paid by employers carrying workers' compensation policies that do not include the standard medical coverage. Estimated from available State data.

percent; State funds, 24 percent; and self-insurance, 15 percent.

The black lung payments, like those for the Federal employee workers' compensation program, have been included with the amounts shown for State funds since, like the State funds, they are publicly funded and operated. The following tabulation shows the quick growth in benefit payments under the black lung benefits program from 1970 to 1973 and their subsequent leveling off. This pattern reflects the large number of claims filed in the first few years of the program on behalf of individuals who had become disabled or died from pneumoconiosis before the 1969 legislation was enacted and who were "blanketed in" under the new program.

About 284,000 miners and widows, as well as

178,000 dependent wives and children, were on the rolls by the end of 1973. Since the beginning of 1974,

Year	Black lung benefit payments, by type (in millions)		
	Total <sup>1</sup>	Disability	Survivor
1970	\$110	\$77	\$33
1971	379	232	147
1972	554	330	224
1973	1,045	650	395
1974	955	600	351
1975	957	587	361
1976	981	578	385

<sup>1</sup> Beginning 1974, includes cash and medical care benefits paid by Department of Labor (less than 0.2 percent of total).

**Table 4.—Benefit payments, by type, 1939–76<sup>1</sup>**

[In millions]

Year	Total	Type of benefit			
		Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
1939	\$235	\$85	\$150	\$120	\$30
1940	256	95	161	129	32
1941	291	100	191	157	34
1942	329	108	221	185	36
1943	353	112	241	203	38
1944	385	120	265	225	40
1945	408	125	283	241	42
1946	434	140	294	250	44
1947	486	160	326	280	46
1948	534	175	359	309	50
1949	566	185	381	329	52
1950	615	200	415	360	55
1951	709	233	476	416	60
1952	785	260	525	460	65
1953	841	280	561	491	70
1954	876	308	568	498	70
1955	916	325	591	521	70
1956	1,002	350	652	577	75
1957	1,062	360	702	617	85
1958	1,112	375	737	647	90
1959	1,210	410	800	700	100
1960	1,295	435	860	755	105
1961	1,374	460	914	804	110
1962	1,489	495	994	879	115
1963	1,582	525	1,057	932	125
1964	1,707	565	1,142	1,007	135
1965	1,814	600	1,214	1,074	140
1966	2,000	680	1,320	1,170	150
1967	2,189	750	1,439	1,284	155
1968	2,376	830	1,546	1,381	165
1969	2,634	920	1,714	1,529	185
1970	3,031	1,050	1,981	1,751	230
1971	3,563	1,130	2,433	2,068	365
1972	4,061	1,250	2,811	2,351	460
1973	5,103	1,480	3,623	2,953	670
1974	5,781	1,760	4,021	3,351	670
1975	6,598	2,030	4,568	3,843	725
1976	7,586	2,380	5,206	4,391	815

<sup>1</sup> Before 1959, excludes Alaska and Hawaii. Beginning 1970, includes Federal black lung benefits.

Source: Estimated by Social Security Administration on the basis of unpublished policy-year data from the National Council on Compensation Insurance.

when claims for black lung benefits were turned over to the Department of Labor, a relatively small number of new benefits have been awarded.

Beginning in 1979, the number of claims and the amount of benefits paid under the black lung program may increase substantially. The Black Lung Benefits Reform Act of 1977 liberalized entitlement and offered previously denied applicants the opportunity to file again under the new provisions. The Department of Labor estimates that more than 400,000 claims will be processed through 1980, including 67,000 new claims and 85,000 claims for medical benefits to miners presently receiving only cash benefits.<sup>9</sup>

Information available for private insurance payments

<sup>9</sup> See Department of Labor, **Black Lung Benefits Act: Annual Report on Administration of the Act**, 1978.

under workers' compensation programs on the number of beneficiaries and amount of benefits, by extent of disability, is shown in table 5. The data there, however, unlike the data in tables 3 and 4, exclude cases where only medical benefits were paid and represents compensable cases for a given year rather than beneficiaries receiving benefits in a year. The proportions of beneficiaries and of total benefits paid, by disability classification, have shown some changes over the years. Notably, relative declines have occurred in the number of cases and amount paid for temporary total disability, along with a rise in payments and cases involving permanent partial disability.

The downward trend in the proportions of cases and aggregate benefits for temporary total disability, evident from 1939 to 1970, showed some "turn around" by 1974. Major improvements in statutory formulas (including maximum weekly amounts payable) during the early 1970's must have had a greater effect on compensation for this type of disability than for the other categories shown in table 5. The reductions made by 14 States during the period 1969–73 in waiting-period requirements and/or in the retroactive period for which the waiting-period benefits are payable are examples of the changes that would have had greater relative impact on both the number of cases and aggregate amounts paid for temporary disability than for other cases. Table 5 also shows the high share of benefits paid for permanent partial disability cases (63 percent in 1974), compared with the share of temporary total disability cases (24 percent).

### Total Benefits in Relation to Payroll

One measure of the year-to-year performance of workers' compensation programs is the total amount of benefits paid as a proportion of covered payroll, shown in table 6 for the period 1940–76. The benefit/payroll ratio grew slowly and irregularly from the end of World War II through the 1960's. As a result of the wave of benefit improvements in the 1970's, the ratio grew steadily from 1970 to 1976, with the largest increases occurring in the 4 latest years. From 1948 to 1969 the ratio grew by only 11 percentage points. During the next 7 years, however, it grew by 25 points, including a 19-point rise from 1972 to 1976.

Among the factors influencing the benefit/payroll ratio is the rate of and seriousness of job-related injuries. The number of lost workday cases in manufacturing and in all private nonfarm industry has been about the same since 1972 when the Bureau of Labor Statistics began its current series. The average number of lost workdays per case, however, has increased somewhat over this period. It is likely that some part of the recent rise in the benefit/payroll ratio reflects



**Table 5.**—Percentage distribution of compensable cases and of aggregate cash benefits (incurred loss), and average benefit, by disability classification, selected policy years, 1939–74 <sup>1</sup>

Policy year	Total		Percentage distribution					
	Number (in thousands)	Amount (in millions)	Total	Death	Disability			
					Permanent total <sup>2</sup>	Permanent partial		Temporary total
		Major <sup>3</sup>		Minor <sup>4</sup>				
Compensable cases <sup>5</sup>								
1939.....	365.0		100.0	1.0	0.1	1.8	12.1	85.0
1954.....	632.1		100.0	.8	.1	2.6	23.2	73.3
1966.....	843.0		100.0	.7	.1	3.2	24.1	71.8
1970.....	896.3		100.0	.6	.1	5.3	22.6	71.4
1974.....	1,030.7		100.0	.5	.2	4.1	20.7	74.5
Cash benefit payments								
1939.....		\$84.0	100.0	16.2	3.9	22.3	26.2	31.4
1954.....		393.5	100.0	11.5	2.0	20.7	36.8	29.1
1966.....		886.5	100.0	11.1	2.1	23.9	38.1	24.9
1970.....		1,263.1	100.0	10.6	2.8	33.9	31.4	21.2
1974.....		1,788.8	100.0	9.7	3.6	31.4	31.3	24.1
Average benefit per compensable case								
1939.....				\$3,873	\$9,415	\$2,792	\$500	\$85
1954.....				9,207	16,758	5,010	986	247
1966.....				15,869	28,128	7,832	1,659	364
1970.....				23,077	28,914	9,070	1,961	418
1974.....				32,204	37,544	13,327	2,627	518

<sup>1</sup> Excludes cases receiving medical benefits only. Data for individual policy years not strictly comparable because of shift in States included and in definition of policy year.

<sup>2</sup> Disability rate at 75–100 percent of total.

<sup>3</sup> Disability with severity equal to about 25–75 percent of total.

<sup>4</sup> Disability with severity equal to less than 25 percent of total.

<sup>5</sup> For permanent injury cases includes, in addition to compensation

for loss of earning power, payments during periods of temporary disability. For temporary disability cases, includes only closed cases known not to have involved any permanent injury and open cases in which, in the carrier's judgment, the disability will be only temporary.

Source: Unpublished data from the National Council on Compensation Insurance.

the trend toward longer spells of disability per disabled worker.

Chart 2 shows benefit/payroll ratio groupings for each State. A total of 16 States had ratios of at least 1 percent, including five in the 0.90–1.09-percent category—Alaska, Idaho, Michigan, Ohio, and New Mexico. States in the Southwest and in the Pacific Northwest tended to have higher ratios than those in other sections.

A diversity of factors probably contributes to the level of the benefit/payroll ratio. The upward trend in the severity of work injuries has been noted. The ratio may also be affected by: (1) The level and distribution of wages and the size of the group at risk, (2) regional differences in cost and accessibility of medical care, and (3) administrative and legal procedures and policies used in evaluating, adjudicating, and policing claims.

### Temporary Total Disability Benefits

Perhaps the most dramatic improvements in the history of workers' compensation programs occurred as

a result of State legislation enacted from 1970 to 1975. Among the most important of these amendments were those that increased the proportion of wages to be replaced by workers' compensation benefits and that raised the maximum weekly benefit amounts. Both types of changes had immediate and widespread effects on the adequacy of benefit payments. The effects of these changes are reviewed here for temporary total disability—the type involved in three-fourths of the cases in a year.

By the end of 1977, all States but Florida, Idaho, and Washington had specified a statutory wage-replacement rate requiring that workers' compensation benefits replace two-thirds of a worker's average weekly wage for cases involving temporary total disability. Only Iowa differed from the two-thirds formula, adopting a formula that set the replacement rate at 80 percent of a worker's spendable earnings. A replacement rate of two-thirds is the level specified by the 1972 National Commission on State Workmen's Compensation Laws as one of its 19 essential recommendations. In 1973—only 4 years earlier—13 States still had replace-

**Table 6.**—Aggregate benefits as percent of payrolls in covered employment and occupational disability incidence rates in manufacturing and in nonfarm private industry, selected years, 1940–76<sup>1</sup>

Year	Benefits as percent of payroll <sup>2</sup>	Manufacturing, average number of—		Nonfarm private industry, average number of—	
		Lost workday cases <sup>3</sup>	Lost workdays per lost workday case	Lost workday cases <sup>3</sup>	Lost workdays per lost workday case
1940.....	0.72	15.3	(4)	(4)	(4)
1946.....	.54	19.9	(4)	(4)	(4)
1948.....	.51	17.2	(4)	(4)	(4)
1949.....	.55	14.5	(4)	(4)	(4)
1950.....	.54	14.7	(4)	(4)	(4)
1951.....	.54	15.5	(4)	(4)	(4)
1952.....	.55	14.3	(4)	(4)	(4)
1953.....	.55	13.4	(4)	(4)	(4)
1954.....	.57	11.5	(4)	(4)	(4)
1955.....	.55	12.1	(4)	(4)	(4)
1956.....	.55	12.0	(4)	(4)	(4)
1957.....	.56	11.4	(4)	(4)	(4)
1958.....	.58	<sup>6</sup> 11.4	(4)	(4)	(4)
1959.....	.58	12.4	(4)	(4)	(4)
1960.....	.59	12.0	(4)	(4)	(4)
1961.....	.61	11.8	(4)	(4)	(4)
1962.....	.62	11.9	(4)	(4)	(4)
1963.....	.62	11.9	(4)	(4)	(4)
1964.....	.63	12.3	(4)	(4)	(4)
1965.....	.61	12.8	(4)	(4)	(4)
1966.....	.61	13.6	(4)	(4)	(4)
1967.....	.63	14.0	(4)	(4)	(4)
1968.....	.62	14.0	(4)	(4)	(4)
1969.....	.62	14.8	(4)	(4)	(4)
1970.....	.66	15.2	(4)	(4)	(4)
1971.....	.67	<sup>6</sup> 4.3	<sup>6</sup> 13	<sup>6</sup> 3.7	<sup>6</sup> 13
1972.....	.68	4.2	15	3.3	14
1973.....	.70	4.5	15	3.4	15
1974.....	.75	4.7	15	3.5	16
1975.....	.83	4.3	17	3.2	17
1976.....	.87	4.6	16	3.4	17

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Excludes benefits financed from general funds, primarily the Federal black lung benefits program.

<sup>3</sup> Per 100 full-time workers, beginning 1971. Data for 1940–70 are the average number of disabling work injuries per million employee-hours worked.

<sup>4</sup> Data not available. Before 1971, series for manufacturing related days lost to hours worked among all workers.

<sup>5</sup> Beginning 1958, series based on revised Standard Industrial Classification Manual. Comparable 1958 figure under earlier series was 10.8.

<sup>6</sup> Data for July–December.

Source: Work-injury rates derived from published and unpublished data of the Bureau of Labor Statistics.

ment rates below the recommended two-thirds. At the end of 1969, before the flurry of legislative activity in the early 1970's began, 23 States had wage-replacement rates below the two-thirds level. In a few of these States, however, the rate was as close as 65 percent to that level.

The legislated wage-replacement rate is only one factor that determines the actual wage replacement received by a disabled worker. Often workers' compensation recipients do not receive benefits equal to the statutory replacement rate because of restrictions imposed by dollar maximums on weekly benefit amounts. In 13 States at the end of 1977, workers earning an

amount equal to the State average weekly wage could not be paid a workers' compensation benefit equal to two-thirds of their wages because such a benefit would have exceeded the allowable weekly maximum.

Even so, in the 1970's extraordinary improvement in liberalizing maximum benefit provisions was seen. As recently as December 1969, in 46 States the maximum benefit provisions prevented disabled workers with average weekly earnings equal to the State average from receiving a benefit that would produce the legislated replacement rate. In the 4 years from 1973 to 1977, however, State maximum weekly benefits for temporary total disability rose an average of 84 percent. During this period, in all but two States the allowable weekly maximum rose at least 25 percent. Increases in the preceding 4 years were more modest. Ten States showed rises in the weekly maximum amount of less than 25 percent.

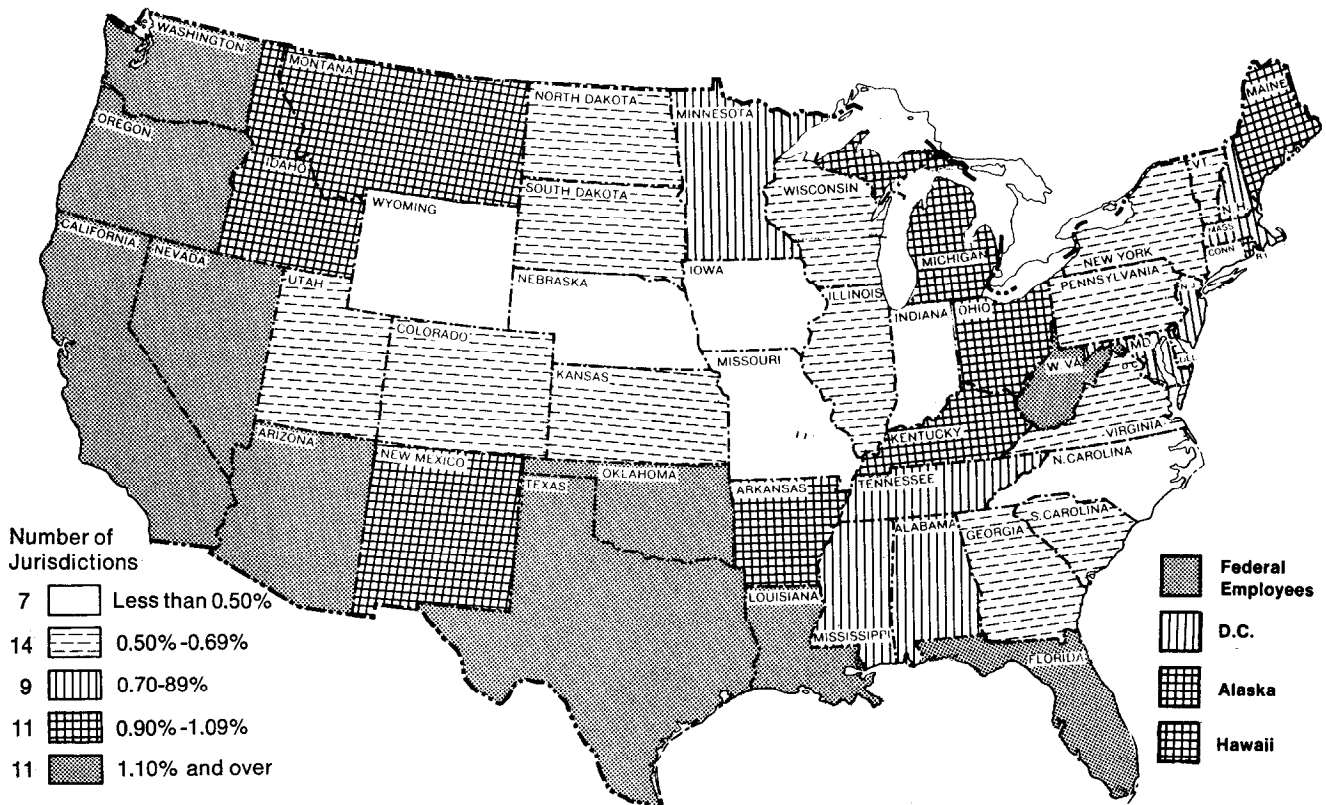
A major legislative advance in recent years has been the establishment of "flexible" maximum provisions. Flexible maximums provide for the automatic adjustment of the ceiling on the weekly benefit amount—commonly a specified proportion of the State average weekly wage for workers covered by the unemployment insurance program. By the end of 1977, 42 States had enacted flexible maximum provisions, usually setting the maximum benefit at 100 percent of the State average wage.

The trend in wage-replacement rates is illustrated by the data on the number of jurisdictions in which workers at the average wage receive benefits equal to at least 65 percent of their wages, if temporarily disabled from work-related disability, and on the proportion of workers with that replacement rate. After many years in which the proportion of workers with a 65-percent replacement rate remained low and stable (less than 10 percent)—as did the number of States providing for such a rate—a sharp upward trend became evident in the 1970's. Thirty-five States, with 64 percent of the covered workers, provided a weekly benefit replacing at least 65 percent of wages in 1977 (and also met the National Commission recommendation for two-thirds replacement).

The ratio of workers' compensation weekly benefits for a temporarily disabled worker is shown, by State, in the left panel of chart 3. The average wage replacement rate for all States was 62 percent at the end of 1977. This average was derived from individual State replacement rates, weighted by covered employment under the workers' compensation program in each State. The average weekly benefit amount that corresponds to the 62-percent replacement rate was \$128.

**Dependents' allowances.** At the end of 1977, 11 States provided supplementary benefits for temporary total

**Chart 2.—Total benefits as a percent of payrolls in covered employment, by jurisdiction, 1976**



disability to workers with dependents, six fewer than in 1969.<sup>10</sup> (Eleven States also offered such allowances for permanent total disability but not the same States in all instances.) The effect of maximum dependents' allowances on the national average replacement rate was modest but noticeable. When dependents' allowances were included, the national average wage replacement was 64 percent—the equivalent of a \$133 weekly benefit.

For workers in States with dependents' allowances the average weekly benefit amount at the end of 1977 for single workers at the average wage was \$143; for workers with the maximum number of dependents the average weekly benefit was \$177. The following tabulation gives the wage-replacement rates for these figures.

Type of benefit for—	Percent of wages in States—	
	With dependents' allowances	Without dependents' allowances
Single worker.....	62	62
Worker with maximum number of dependents.....	77	62

<sup>10</sup> One other State, Illinois, provided dependents' allowances but only for low-paid workers.

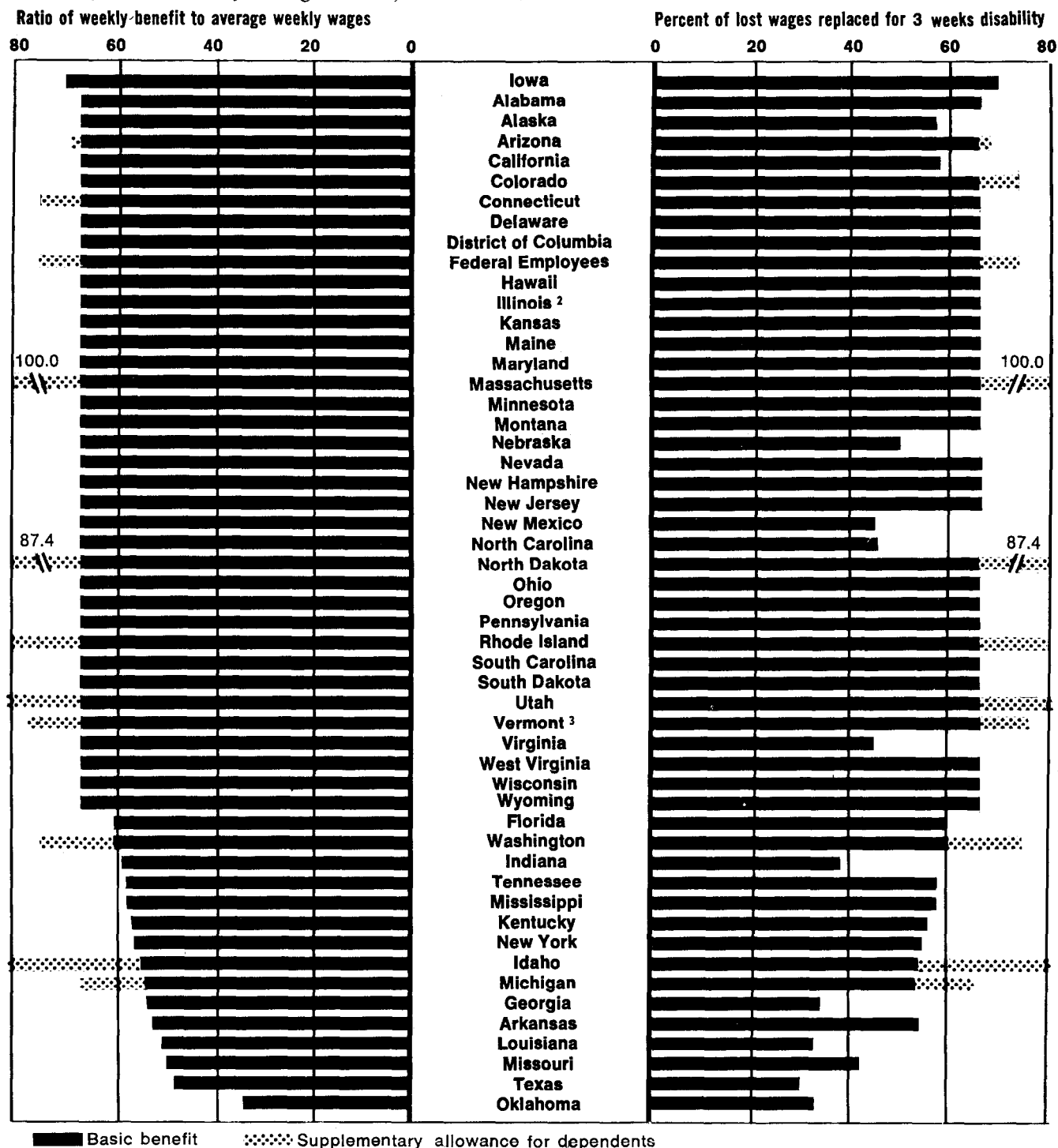
As in previous years, the benefit for a single worker is about the same whether or not the State provides dependents' allowances. Nevertheless, the rates have improved considerably—with all of them rising 10-11 points above the 1969 rates.

Chart 3 shows no particular replacement-rate pattern for States with dependents' allowances. The absence of such allowances in the Southern States is clear. In the 1950's and 1960's, some concentration of dependents' allowances was apparent among States with wage-replacement rates at the lower end of the range, suggesting that these allowances may have been used to supplement a lower-than-average workers' compensation benefit.

**Waiting periods.** Another important factor affecting the true wage-replacement rate achieved by workers' compensation benefits is the duration of disability. State laws typically provide a cash indemnity benefit only after the worker has been disabled 3 or 7 days. (A few States have 2- or 5-day waiting periods.) If the worker is out of work for a specified total number of days (ranging from 5 to 42), payment is made retroactively for the waiting period. The average weekly replacement rate is therefore very much affected by these waiting-period provisions and the overall duration of disability.

Waiting-period provisions have tended to be stable

**Chart 3.**—Measures of interstate variation: Weekly benefit payable for temporary total disability as a percent of average weekly wage, 1976, and percent of lost wages replaced for worker with 1976 average weekly wage for temporary total disability lasting 3 weeks, December 1977 <sup>1</sup>



<sup>1</sup> Maximum weekly benefit for worker with and without eligible dependents under laws paying dependents' allowances; average wage for workers covered by unemployment insurance program or the wage used by a State for determining its maximum weekly benefit where different.

<sup>2</sup> Dependents' allowances provided, but maximum same for workers earning average wage whether or not they have dependents.

<sup>3</sup> Assumes 3 dependents.

throughout the history of workers' compensation programs. Only two liberalizations in waiting-period requirements were made from 1961 to 1969. From 1969 to 1977, however, 10 States reduced their waiting pe-

riods. Yet, at the end of 1977, fewer than half the States had met the recommendation of the National Commission for a maximum waiting period of 3 days. From 1969 to 1977, significant improvements were

also made in the number of days of disability required before retroactive payments could be made for a waiting period. Again, fewer than half the States met the National Commission's goal of a retroactive-payment provision that requires no more than 14 days of disability.

Eight States at the end of 1977 still required a worker to be disabled at least 4 weeks before the retroactive payment of waiting-period benefits. Legislative activity in this area came nearly to a halt after 1975 and has since been limited to the waiting-period liberalizations in Iowa, Kansas, and Oklahoma and to Virginia's reduction of its days-of-disability requirement before retroactive waiting-period benefits.

The right panel of chart 3 shows average wage-replacement rates, by State, for a worker with a temporary total disability lasting 3 weeks. This period matches survey data published by the Bureau of Labor Statistics indicating that, for the private sector in 1976, the average occupational injury and illness resulted in 17 lost workdays—at least 21 calendar days.<sup>11</sup>

The national average wage-replacement rate for a worker disabled for 3 weeks was 58 percent for those with no dependents and 60 percent for those with the maximum dependents' allowance. As with most other measures of benefit adequacy explored thus far, these rates represent a considerable improvement over earlier years. At the end of 1969, the corresponding replacement rates were 44 percent and 48 percent, respectively.

In 4 out of 5 States, the wage-replacement rate for 3 weeks of disability, with the effect of waiting-period and retroactive waiting-period-pay provisions taken into account, did not differ from the overall wage-replacement rate. This similarity of the rates by the end of 1977, reflects the fact that 41 States paid retroactive benefits for waiting periods after 21 or fewer days of disability. As a result of the combined effects of waiting periods, retroactive pay provisions, and limitations in maximum weekly amounts, however, only 31 States (with 45 percent of covered workers) provided a worker disabled for 3 weeks with a benefit equal to two-thirds of wages.

**Net wage-replacement rate.** Another way of evaluating the benefit/wage replacement rate for temporary total disability is to relate weekly benefits to estimated net earnings. This evaluation provides a closer approximation of the value of the benefit in relation to money actually available to the worker and his family. The average weekly wages of a single worker and a worker with a wife and two dependents were used for this analysis. For both examples, data were compiled in accordance with whether or not the worker lived in a jurisdiction that provided dependents' allowances.

The gross average weekly wage was the starting point, and appropriate Federal income-tax withholding deductions and social security contributions were assumed for the specified family with a standard, personal deduction. It was also assumed that the family had no unearned income. No attempt was made to account for insurance contributions, union dues or other voluntary deductions from pay. The estimates do not readily lend themselves to subtraction of State and local government income taxes withheld, because of the wide variability of rates and the lack of applicability to workers in some States. The data, with one illustrative exception, therefore do not take State and local government taxes into account.

A worker with no dependents earning the nationwide average weekly wage of \$207 in 1976 would have paid \$29 in Federal income tax each week and \$12 in social security contributions, with a take-home pay of \$166. The average workers' compensation benefit of \$128 for such a worker would therefore replace 77 percent of his take-home pay. This ratio differed little for single workers whether they were in the 11 States with dependents' allowances (78 percent) or the 41 States without (77 percent). As the benefit-wage ratios based on these figures given below indicate, the ratios

Year	Wage-replacement rate for—		
	Single worker	Worker, wife, and two children, in jurisdictions—	
		With dependents' allowances	Without dependents' allowances
1969.....	68	73	60
1973.....	70	75	66
1977.....	77	83	71

for workers with a wife and two children in jurisdictions with and without dependents' allowances differed substantially.

The tabulation above also points up the improvement in wage-replacement rates from 1969 to 1977. The increases shown actually understate the improvement because the rates were artificially raised to some extent by the Federal income surtax in 1968 that temporarily reduced the level of take-home pay. In addition, the general tax credit in 1976 temporarily revised the level of take-home pay and so reduced replacement rates for 1977.

In order to offer insight into the approximate effect of deducting State income tax from weekly earnings, an estimated weekly average State tax rate for the Nation for a single worker was computed as \$5.<sup>12</sup>

<sup>11</sup> U.S. Department of Labor, News Release 77-1031, December 1, 1977.

<sup>12</sup> This estimate is based on methodology developed in the Office of the Actuary, Social Security Administration.

Subtracting the amount produces a \$161 average net weekly wage, with an 80-percent wage replacement rather than the 77 percent without taking State income tax into account.

### **Permanent Disability and Death Benefits**

Job-related injury or disease that results in permanent disability or death accounts for a relatively small number of workers' compensation cases but represents the major part of all benefits. In 1974, such cases accounted for about one-fourth of the private insurance caseload but for three-fourths of the benefit payments. As for temporary disability benefits, considerable improvements were made during the 1970's in the benefits payable for these cases. Statutory wage-replacement rates and maximum weekly benefits are sometimes lower for permanent disability and death cases, however, than they are for temporary disability cases. Nevertheless, the preceding analysis of benefit/wage ratios for temporary disability can be applied to the permanent disability and death cases if it is recognized that waiting periods result in a lower proportionate loss of benefits when permanent disability or death are involved.

Benefit inequities are more likely to arise in permanent disability cases, regardless of the adequacy of the statutory provisions. The difficulty of correctly assessing the extent of long-term disability makes for benefit awards that sometimes are too low (or too high). Workers may, for example, be rated as partially disabled under workers' compensation but subsequently certified as totally disabled under the social security program.<sup>13</sup>

Another important measure of the adequacy of State provisions for permanent disability and death cases is the duration of benefits. A severe limitation in permanent disability cases is the expiration of benefit entitlement, even though the disability and resultant income loss continue. At the end of 1977, 11 States still restricted permanent disability benefits through a maximum in the number of weeks for which benefits could be paid or through a ceiling on dollar payments. The present number of States with such restrictions is fewer than the 19 in 1969 but still represents an important defect in the workers' compensation system as a whole.

Time or dollar restrictions on benefit payments were even more prevalent in the area of survivor benefits. At the end of 1977, one-third (18) of the States had such limitations on survivor benefits. The duration of survivor benefits was generally restricted to 10 years, although Illinois permitted the payment of benefits for the greater of 20 years or \$25,000. Dollar maximums on survivor payments ranged from \$14,000 to \$60,000.

<sup>13</sup> See Wayne Vroman, **Work Injuries and Wage Losses for Partially Disabled Workers** (paper presented at the Industrial Relations Association meeting, September 18, 1976).

Despite the continued existence of time and dollar restrictions in these 18 States, especially dramatic progress was made in eliminating such limits in the 1970's. From 1969 to 1977, 21 States removed the restrictions on widows' benefits with respect to duration or the aggregate amount payable or both. Nevertheless, the substantial extent of survivor benefit restrictions still in effect reinforce the concerns of Congress and the Executive branch that workers' compensation programs do not provide complete protection from job-related income loss.

An important consideration in evaluating the adequacy of benefits for permanent disability or death is whether benefits are adjusted periodically to keep pace with rises in wage levels and to offset the effects of inflation. These adjustments are particularly important for workers who become disabled at younger ages and who are on the benefit rolls for an extended period of time. For such individuals, benefits become less adequate over the years as prevailing wages and prices rise. Furthermore, the wages upon which their benefits are based do not reflect increases that would have occurred if they had continued in the labor force and gained experience, skill, and seniority.

A number of States have raised benefits from time to time for those already on the rolls. In Utah, for example, to bring total weekly payments for permanently and totally disabled beneficiaries to \$60 (when combined with employer or insurance carrier compensation), increases were granted from a special State fund. Utah raised these benefits again (to \$75) in 1977. New York and North Carolina also provided one-time increases in 1977.

Provisions that raise benefits automatically are a more desirable means of keeping benefits that are payable for long periods from deteriorating as a result of inflation. At the end of 1977, more than 12 jurisdictions had such provisions. Changes in wages or prices were usually used to determine the amount of benefit adjustments. Several States enacted automatic adjustment provisions during the 1970's, adding to the seven States with such provisions in effect in 1972. Alaska repealed its automatic adjustment provision in 1977, however, and Oregon reduced the scope of its provision by limiting it to beneficiaries on the rolls before April 1974. The adverse impact of inflation on workers' compensation benefits of long duration remains an unresolved problem for most State programs.

### **Costs**

The total cost of workers' compensation to employers is made up of several elements. In addition to benefit costs, commonly termed "pure premium," there are the

**Table 7.**—Estimated costs of workers' compensation to employers as percent of payroll in covered employment, selected years, 1940-76

Year	Amount <sup>1</sup> (in millions)	Percent of payroll
1940	\$421	1.19
1946	726	.91
1948	1,013	.96
1949	1,009	.98
1950	1,013	.89
1951	1,185	.90
1952	1,333	.94
1953	1,483	.97
1954	1,499	.98
1955	1,532	.91
1956	1,666	.92
1957	1,734	.91
1958	1,746	.91
1959	1,869	.89
1960	2,055	.93
1961	2,156	.95
1962	2,323	.96
1963	2,510	.99
1964	2,713	1.00
1965	2,908	1.00
1966	3,279	1.02
1967	3,655	1.07
1968	4,034	1.07
1969	4,460	1.08
1970	4,894	1.11
1971	5,191	1.11
1972	5,832	1.14
1973	6,771	1.17
1974	7,881	1.24
1975	8,972	1.32
1976	11,045	1.47

<sup>1</sup> Premiums written by private carriers and State funds, and benefits paid by self-insurers increased by 5-10 percent to allow for administrative costs. Also includes benefit payments and administrative costs of Federal system. Where necessary, fiscal year data converted to calendar year data. Before 1959, excludes Alaska and Hawaii. Excludes costs of benefits financed from general funds, primarily the Federal black lung benefits program.

overhead costs of insuring the risk known as "expense loading." Both benefit and overhead costs are reflected in the premium rates (or their equivalent) that employers pay to insure or self-insure the risk of work injury. Overhead costs include the expenses of policy-writing, ratemaking, payroll auditing, claims investigation and adjustment, safety inspection, legal and medical services, and general administration. In self-insurance, some of these overhead expenses are eliminated or reduced, but insurance provided by commercial carriers has additional charges, such as acquisition costs (commissions and brokerage fees), taxes and licenses, and allowances for underwriting profit and gain.

In 1976, the total estimated employer costs of the workers' compensation system were \$11.0 billion (table 7). This amount was 23 percent more than costs in the previous year and represented the largest annual increase by far in the 29-year period for which data are shown. The 1970's, in general, have been characterized by substantial annual increases in premium costs. As the following figures show, the relative growth in costs from 1970 to 1976 was larger than the growth for the three previous 6-year periods.

Period	Percentage increase in costs
1952-58	31
1958-64	55
1964-70	80
1970-76	126

The steady growth in costs for each successive 6-year period reflects the effects of several factors—notably, the inflationary pressure on wages and the extensions of program coverage and benefit provisions.

The impact of inflation on program costs can be largely eliminated from the data by relating premiums to payrolls in covered employment. As table 7 reveals, costs per \$100 of payroll rose slowly but irregularly during the 1960's. Beginning in 1973, this ratio grew rapidly, reaching \$1.47 in costs per \$100 of payroll by 1976. The benefit liberalizations of the 1970's were largely responsible for the rise in the cost-to-payroll ratio in the most recent years shown.

The costs of workers' compensation programs vary from State to State depending on many factors. The most important of these factors are the differences in State program provisions and in the composition of industries within the State. Unpublished cost data from the National Council of Compensation Insurance based on earned premiums for 44 States and the District of Columbia show that cost-to-payroll ratios for policy periods beginning in 1974 ranged from 0.5 percent in Delaware to 3.8 percent in Oregon. For all States, the cost-to-payroll ratio averaged 1.6 percent. Only 5 States had ratios of less than 1 percent in 1974, compared with 11 States in 1970. In 1970 the average ratio rate for all States was 1.3 percent.

The number of occupational injuries and illnesses resulting in one or more lost work days in 1976 averaged 3.5 per 100 full-time workers and varied considerably with industrial classification.<sup>14</sup> For the private sector, average work-related injuries or illnesses per 100 workers ranged from 2.0 in the service industries to 5.8 in mining. A recent study<sup>15</sup> found that, with adjustments made for industry differences among 45 classifications, average premium costs for 1975 among the 44 States for which comparable data were available ranged from 0.4 percent of payroll in Iowa to 2.2 percent in Arizona.

Interstate cost differences also are affected by expense-loading variations. These, in turn, are influenced by premium tax rates, population density, and the extent to which premiums are used to meet acquisi-

<sup>14</sup> See Bureau of Labor Statistics, **Chartbook on Occupational Injuries and Illnesses in 1976** (Report 535), table 1.

<sup>15</sup> John F. Burton, **Workers' Compensation Costs for Employers** (forthcoming study for the Interdepartmental Workers' Compensation Task Force).

tion costs and other administrative expenses under the various methods by which compensation liability is incurred.

### Loss and Expense Ratios of Private Carriers

Benefits can be related to costs as a measure of the effectiveness of workers' compensation programs in providing income-maintenance protection to disabled workers. For the following analysis, the data on benefits are taken from table 4 and those on costs are from table 7.<sup>16</sup> The following tabulation shows the relationship between benefits and costs for selected years.

[Amounts in millions]

Year	Costs	Benefit payments	
		Amount	As percent of costs
1950.....	\$1,013	\$615	60.7
1960.....	2,055	1,295	63.0
1970.....	4,894	2,889	59.0
1975.....	8,972	5,600	62.4
1976.....	11,045	6,551	59.3

As the figures above indicate, the benefit cost or "loss" ratio has been stable, with roughly 60 cents of every premium dollar paid as cash or medical benefits. The overall ratio conceals sharp variations that result from differences in the insurance mechanisms. For self-insurers and the system for Federal employees, the ratio is 90–95 percent because cost is figured on the basis of benefit payments during the year plus administrative expenses. For participating carriers—primarily mutual companies—and for some State funds, the ratio is lower than it would be if the payment of dividends could be taken into account. The cost for employers insured by these carriers can be said to be overstated to the extent that part of their premiums may later be returned in the form of dividends.

For all private carriers and State funds, moreover, a benefit/cost ratio based on losses paid during the year is lower than one based on losses incurred. This difference is especially great in a period when insured payrolls are rising rapidly. The large amounts of premium income that must be set aside to cover liabilities for future payments may be considerably higher than the amounts paid during the year in cases continued from earlier years when wages and compensation rates were lower.

The loss ratio based on losses incurred is an important measure since it is commonly used by insurance

<sup>16</sup> Benefits for 1970 and later are net of the amounts financed by general revenue (primarily Federal black lung benefits and supplemental payments made by a few States).

**Table 8.—Comparative ratios of benefits to premiums, private carriers, 1950–76<sup>1</sup>**

[Amounts in millions]

Year	Direct premiums written in relation to losses (benefits) paid <sup>2</sup>			Premiums earned in relation to losses (benefits) incurred <sup>3</sup>		
	Direct premiums written <sup>4</sup>	Direct losses paid	Loss ratio	Premiums earned <sup>4</sup>	Losses incurred	Loss ratio
Total	\$68,458.9	\$36,063.3	52.7	\$63,744.8	\$42,881.1	67.3
1950....	721.5	381.3	52.8	696.6	427.7	61.4
1951....	844.5	444.4	52.6	789.9	518.5	65.6
1952....	956.3	491.0	51.3	903.7	371.9	63.3
1953....	1,074.1	524.2	48.8	1,010.6	605.4	59.9
1954....	1,067.3	540.5	50.6	1,010.8	561.4	55.5
1955....	1,078.4	562.5	52.2	1,027.9	594.3	57.8
1956....	1,152.8	618.1	53.6	1,103.4	649.3	58.8
1957....	1,234.1	660.9	53.6	1,173.5	706.7	60.2
1958....	1,235.0	694.4	56.2	1,193.9	746.6	62.5
1959....	1,322.5	752.6	56.9	1,271.4	821.7	64.6
1960....	1,452.3	809.9	55.8	1,367.9	874.2	63.9
1961....	1,530.9	850.9	55.6	1,434.0	930.8	64.9
1962....	1,651.1	924.0	56.0	1,562.6	982.1	62.8
1963....	1,782.3	987.6	55.4	1,671.3	1,071.7	64.1
1964....	1,924.8	1,069.6	55.6	1,827.8	1,153.4	63.1
1965....	2,074.4	1,124.0	54.2	1,966.6	1,236.4	62.9
1966....	2,366.4	1,239.1	52.4	2,229.4	1,412.8	63.4
1967....	2,640.2	1,362.9	51.6	2,500.4	1,584.7	63.4
1968....	2,940.0	1,481.6	50.4	2,796.9	1,727.2	61.8
1969....	3,255.0	1,641.0	50.4	3,089.9	1,930.3	62.5
1970....	3,578.4	1,843.3	51.5	3,356.5	2,124.3	63.3
1971....	3,749.3	2,004.5	53.5	3,516.3	2,396.3	68.1
1972....	4,180.6	2,178.6	52.1	3,887.4	2,704.0	69.6
1973....	4,868.7	2,513.5	51.6	4,523.7	3,113.4	68.8
1974....	5,602.0	2,970.8	53.0	5,174.9	3,725.7	72.0
1975....	6,343.8	3,421.7	53.9	5,747.7	4,275.6	74.4
1976....	7,832.2	3,975.8	50.8	6,909.8	5,434.7	78.7

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Data for 1950–58 from *Spectator: Insurance by States*, annual issues. Data for 1959–66 compiled from published and unpublished reports of the State insurance commissions. Beginning 1967, data from A. M. Best Company.

<sup>3</sup> From National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)*, annual issues.

<sup>4</sup> Excludes premium discounts and retrospective adjustments but not dividends.

organizations in evaluating and revising their premium rates. The difference between this ratio and that based on benefits paid is seen in table 8. The data from the National Council on Compensation Insurance on private-carrier experience shows: (1) Greater loss ratios when measured by incurred loss than by losses paid and (2) the rapid growth of the gap between the two measures in the 1970's. The smallest difference in loss ratios—4.9 percentage points—was in 1954 when the ratio based on losses paid was 50.6 percent and that based on losses incurred was 55.5 percent. By 1976 a 27.9 point spread existed between the losses-paid ratio and the losses-incurred ratio.

This change in private insurance experience was mostly a function of a disproportionately large increase in losses incurred. From 1970 to 1976, losses incurred rose 156 percent while losses paid and premiums earned and written rose 106–119 percent. During the same period, average weekly earnings of production workers in private industry went up 46 percent and this wage



increase had a substantial impact on incurred-benefit levels. The other major factor that accounted for much of the rise in incurred losses from 1970 to 1976 was the liberalization of benefit provisions during those years.

Premiums paid by employers to cover benefits to workers also cover operating expenses of insurers and provide a margin for profit. Table 9 shows the experience of stock and mutual companies that do the bulk of private insurance business for workers' compensation programs. Comparisons of the ratios of benefits and expenses to premiums for the two types of companies must be made with caution, since their mode of operation is different. Nonparticipating stock companies, for example, distribute profits among their stockholders, but the bulk of the profits of mutual companies is returned to policyholders as dividends—in essence the difference between the anticipated and actual cost of insurance. Recent data on dividends returned to policyholders have been published by the National Council on Compensation Insurance in its **Insurance Expense Exhibit**. For 1976, these dividends, as a percentage of earned premiums, were 3.9 percent for stock companies and 10.2 percent for mutual companies.

The dividend patterns have an effect on the results shown in table 9 for mutual and stock companies. If dividends are subtracted from premiums earned in computing the expenses ratio, the 1976 expense ratio for stock companies increases 1.1 points (from 27.9 percent to 29.0 percent) but that for mutuals goes up 2.6 points (from 22.4 percent to 25.0 percent).

The net-gain ratio—representing underwriting gain with dividend payments included—has continued to decline in recent years to the point that stock companies have shown losses in 3 of the 4 most recent years that averaged 4.5 percent for the 1972–76 period. This trend reflects the effects of factors already noted, especially accelerating inflation.

The gain ratios of mutual companies, though traditionally higher than those of stock companies, also declined dramatically in the 1970's. They averaged 6.3 percent for the 1972–76 period, compared with 12.5 percent 8 years earlier.

Investment income earned by companies is another important part of the gain generated by workers' compensation insurance. In 1976, stock company experience was slightly more favorable than that of mutuals. For stock companies the **Insurance Expense Exhibit** showed investment income of \$358 million or 7.2 percent of earned premiums in 1976; in the same year, mutual companies earned \$107 million in investments, or 6.2 percent of premiums.

Even with investment income added to underwriting income, stock companies experienced a loss of 1.2 percent in 1976, while mutual companies showed a profit of 11.8 percent. Subtracting dividends from each

**Table 9.—Countrywide workers' compensation experience of stock and mutual companies, 1939–72**

[Amounts in thousands]

Year	Premiums earned	Losses (benefits) incurred	Loss ratio	Expenses incurred	Expense ratio	Net gain ratio <sup>1</sup>
Stock companies <sup>2</sup>						
1939–47 <sup>3</sup>	\$1,934,554	\$1,110,676	57.4	\$733,512	37.9	4.7
1948–56 <sup>3</sup>	3,920,104	2,318,171	59.1	1,403,189	35.8	5.1
1957–64 <sup>3</sup>	6,131,817	3,924,643	64.0	2,119,200	34.6	1.5
1965–68 <sup>3</sup>	6,217,537	3,936,791	63.3	1,948,892	31.3	5.4
1969–72 <sup>3</sup>	9,576,112	6,367,446	66.5	2,872,614	30.0	3.5
1973–76	16,144,093	12,184,220	75.5	4,688,766	29.0	-4.5
1973	3,246,873	2,256,832	69.5	976,277	30.1	.4
1974	3,741,318	2,738,037	73.2	1,117,940	29.9	-3.1
1975	4,196,331	3,193,950	76.1	1,212,458	28.9	-5.0
1976	4,959,571	3,995,401	80.6	1,382,092	27.9	-8.4
Mutual companies <sup>2</sup>						
1939–47 <sup>3</sup>	\$1,200,334	\$684,948	57.1	\$273,267	22.8	20.1
1948–56 <sup>3</sup>	2,614,500	1,533,125	58.6	626,992	24.0	17.4
1957–64 <sup>3</sup>	3,421,181	2,140,765	62.6	891,391	26.1	11.3
1965–68 <sup>3</sup>	2,979,624	1,846,522	62.0	759,943	25.5	12.5
1969–72 <sup>3</sup>	3,926,109	2,556,717	65.1	991,898	25.3	9.6
1973–76	5,573,957	3,871,636	69.5	1,350,577	24.2	6.3
1973	1,170,571	785,338	67.1	295,190	25.2	7.6
1974	1,293,301	886,932	68.6	327,578	25.3	6.1
1975	1,395,218	963,634	69.1	343,638	24.6	6.3
1976	1,714,867	1,235,732	72.1	384,171	22.4	5.5

<sup>1</sup> Underwriting gains before dividends to stockholders and policyholders; excludes investment income.

<sup>2</sup> Disregards dividends to policyholders; if taken into account, would result in higher loss and expense ratios.

<sup>3</sup> Annual figures previously published in workers' compensation articles that appeared in the *Social Security Bulletin*, in March 1954, August 1958, October 1966, 1970, and 1974.

Source: Data for 1939–64 compiled from Annual Reports of the New York State Insurance Department and from the Annual Casualty-Surety Editions of the *Eastern Underwriter* and refer to countrywide business of private carriers operating in the State of New York (representing about 80 percent of all business underwritten for United States employers by insurance companies). Beginning 1965, data from annual issues of National Council on Compensation Insurance, **Insurance Expense Exhibit (Countrywide)** and refer to countrywide business of all private carriers operating in the United States.

of these rates produced a larger loss rate for stock companies (5.1 percent) and a smaller profit rate for mutual companies (1.6 percent). These measures of profit or loss for workers' compensation insurance are only a partial representation of the total picture, as other types of income such as capital gains and assets should also be taken into account.<sup>17</sup>

Table 10 shows the detailed expenses incurred by private insurance companies in administering workers' compensation business. Nonparticipating stock companies typically have had higher expense ratios than other types of insurers, but the difference has narrowed over the years. From 1950 to 1976, the average total expense ratio for nonparticipating stock companies

<sup>17</sup> See Bernard L. Webb, W. Ray Bagwell, and Bruce A. Palmer, "The Profitability of Workmen's Compensation Insurance," **Supplemental Studies for the National Commission on State Workmen's Compensation Laws**, 1973, vol. III, pages 216–454, for an examination of the other types of income.

**Table 10.**—Administrative expenses incurred as percent of net premiums earned, by category of expense and major type of private carrier, selected years, 1950–76 <sup>1</sup>

Year	Expenses incurred as percent of net premiums earned <sup>2</sup>						
	Total	Investigation and adjustment of claims	Acquisition, field supervision, and collection expenses <sup>3</sup>	Taxes, licenses, and fees	Safety inspection and engineering	Payroll audit	Other <sup>4</sup>
Nonparticipating stock companies							
1950.....	40.9	10.3	17.4	3.8	1.6	2.7	5.1
1955.....	36.5	8.7	15.8	3.5	1.4	2.3	4.8
1960.....	36.9	9.4	15.4	3.6	1.2	1.9	5.4
1965.....	34.6	8.9	14.5	3.7	1.1	1.4	5.0
1970.....	30.9	8.5	12.0	3.8	1.0	1.0	4.6
1971.....	30.8	8.4	11.8	4.0	.8	.8	5.0
1972.....	32.3	8.8	12.4	4.2	( <sup>b</sup> )	( <sup>b</sup> )	6.9
1973.....	32.0	8.4	12.6	4.2	( <sup>b</sup> )	( <sup>b</sup> )	6.8
1974.....	32.1	8.8	12.2	4.2	( <sup>b</sup> )	( <sup>b</sup> )	6.9
1975.....	30.8	8.3	11.7	4.1	( <sup>b</sup> )	( <sup>b</sup> )	6.7
1976.....	29.7	8.5	10.9	4.0	( <sup>b</sup> )	( <sup>b</sup> )	6.3
Participating stock companies							
1950.....	28.6	8.2	11.5	2.4	1.1	1.1	4.3
1955.....	28.3	7.9	11.9	2.3	1.0	.9	4.3
1960.....	26.8	8.3	11.0	2.3	.7	.6	3.9
1965.....	25.1	8.1	9.9	2.3	.7	.6	3.5
1970.....	25.2	8.7	8.4	2.8	.6	.6	4.1
1971.....	25.4	8.7	8.6	2.9	.6	.6	4.0
1972.....	25.8	8.4	8.6	3.5	( <sup>b</sup> )	( <sup>b</sup> )	5.3
1973.....	25.4	8.6	7.7	3.6	( <sup>b</sup> )	( <sup>b</sup> )	5.5
1974.....	24.3	8.3	7.3	3.6	( <sup>b</sup> )	( <sup>b</sup> )	5.1
1975.....	24.7	8.1	7.4	4.1	( <sup>b</sup> )	( <sup>b</sup> )	5.1
1976.....	24.3	8.6	7.4	4.0	( <sup>b</sup> )	( <sup>b</sup> )	4.3
Mutual companies							
1950.....	25.0	8.0	7.4	3.1	2.3	1.2	3.0
1955.....	25.0	7.7	7.5	2.8	2.3	1.1	3.6
1960.....	25.6	8.3	7.4	3.0	2.2	1.0	3.7
1965.....	26.6	8.9	7.4	3.5	2.1	1.0	3.7
1970.....	24.0	8.1	6.4	3.6	1.8	.9	3.2
1971.....	25.6	8.8	6.4	4.0	1.8	1.0	3.6
1972.....	26.6	9.0	6.9	4.3	( <sup>b</sup> )	( <sup>b</sup> )	6.4
1973.....	25.2	8.6	6.5	4.1	( <sup>b</sup> )	( <sup>b</sup> )	6.0
1974.....	25.3	8.8	6.8	3.8	( <sup>b</sup> )	( <sup>b</sup> )	5.9
1975.....	24.6	8.3	6.5	4.1	( <sup>b</sup> )	( <sup>b</sup> )	5.7
1976.....	22.5	8.2	5.3	3.9	( <sup>b</sup> )	( <sup>b</sup> )	5.1

<sup>1</sup> Before 1959, excludes Alaska and Hawaii.

<sup>2</sup> Net premiums earned excludes premium discounts and retrospective adjustments but not dividends.

<sup>3</sup> Includes commission and brokerage expenses.

<sup>4</sup> Includes general administration and rating bureau expenses. Be-

ginning 1972, data include safety inspection and payroll audit costs. <sup>5</sup> Included in "other."

Source: National Council on Compensation Insurance, *Insurance Expense Exhibit (Countrywide)*, annual issues.

dropped from 40.9 percent to 29.7 percent. Average expenses of mutual companies fell only 2.5 points, from 25.0 percent of premiums in 1950 to 22.5 percent in 1976. Part of the disparity between the two types of companies in expense ratios occur because stock companies sell most of their policies through commissioned agents and most mutual sales are by salaried employees of the company. This difference shows up in the acquisition, field supervision, and collection expenses item of table 10.

Table 10 also shows that a relatively small part of the premium dollar goes toward safety inspections. Mutual companies spent the most for this activity (1.8 percent) as of 1971, the latest date this information was available. No other patterns emerge among the

expenses of obtaining and maintaining workers' compensation policies.

### State Funds

Over the years, considerable controversy has arisen as to whether private insurance or publicly operated funds provide the best means of administering workers' compensation programs. Eighteen States have established publicly operated funds to meet the insurance requirements of the State program. In six of these States, the public fund is the exclusive insurance mechanism. In the other 12 States, the public fund operates in competition with private insurers.

In 1976, the benefit/cost ratio for State funds was

69 percent (table 11). Although it was notably lower than that for 1975 (76.4 percent), it was close to that for most years back to 1964: For 1964–76 the average ratio was 70.4 percent. The private carrier loss ratio also dropped from 1975 to 1976, although not as much. Throughout the years, the loss ratio for the State funds has generally been 15–20 points higher than that for private carriers.

The loss ratios for public funds in table 11 are not strictly comparable, however, with those for private carriers in table 8. First, the premium income of State funds is more likely to reflect anticipatory dividends or advance discounts on premium rates charged for standard risks. For private carriers, especially mutual companies, the difference between the anticipated and the actual cost of insurance is usually reflected in ex post facto dividends returnable to policyholders—an item not taken into account in table 8.

Second, the premium charges of some State funds do not always cover allowances for certain items included in the premium charges of private carriers—the maintenance of certain reserves, for example, the administrative and legal services financed through public appropriations or provided by other government departments, and taxes and other special assessments. Third, benefit outlays for the State funds reflect the fact that the States generally insure an undue proportion of the high-hazard undesirable risks, many of which cannot get insurance from private carriers. These factors combine to increase the loss ratio for State funds.

Administrative expenses of State funds averaged 11.8 percent of costs in 1964–76. In 1975 and 1976, the rate dropped a little, reaching 10.1 percent in 1976. These administrative cost rates are notably lower than those of private carriers shown in table 9. (Since the information in table 9 relates expenses to premiums earned, but the data in table 11 are in terms of premiums written, a certain degree of noncomparability exists.)

A more important reason for the gap between the administrative costs for public funds and private carriers is their very different modes of operation. Acquisition costs are an important expense for private carriers, but competitive State funds spend a very small proportion of premiums for obtaining business and the exclusive State funds spend practically nothing. Even among State funds, the difference between competitive and exclusive funds in administrative-expense ratios is considerable. For 1976, the administrative-expense ratio of competitive public funds was 14.0 percent and that of exclusive funds, 5.8 percent.

Other operating expense items have differences in significance for State funds and private carriers that must be considered in comparing the two sectors. Private carriers include in their expenses certain charges that not all State funds are required to meet out of

**Table 11.—Benefit payments and administrative expenses in relation to premiums written, 18 State funds, 1950–76<sup>1</sup>**

[Amounts in millions]

Year	Premiums written <sup>2</sup>	Benefits paid <sup>3</sup>		Administrative expenses <sup>4</sup>	
		Amount	Percent of premiums	Amount	Percent of premiums
Total.	\$4,222.3	\$3,053.2	72.3	\$388.4	9.2
1950.....	172.1	126.7	73.6	16.5	9.6
1951.....	204.9	140.9	68.3	18.6	9.1
1952.....	228.6	158.3	69.2	20.4	8.9
1953.....	250.1	170.4	68.1	21.9	8.8
1954.....	265.9	183.2	68.9	24.1	9.1
1955.....	279.6	192.6	68.9	24.4	8.7
1956.....	324.3	209.5	64.6	26.0	8.0
1957.....	300.8	216.7	72.0	26.3	8.7
1958.....	302.4	225.9	74.7	29.6	9.8
1959.....	328.4	247.6	75.4	31.2	9.5
1960.....	366.9	266.0	72.5	33.6	9.2
1961.....	370.7	287.0	77.4	36.0	9.7
1962.....	394.8	307.8	78.0	38.4	9.7
1963.....	432.8	320.6	74.1	41.4	9.6
Total.	\$10,803.0	\$7,604.6	70.4	\$1,270.3	11.8
1964.....	469.8	337.4	71.8	57.9	12.3
1965.....	493.9	351.3	71.1	61.3	12.4
1966.....	531.9	374.2	70.4	66.0	12.4
1967.....	591.8	394.6	66.7	68.9	11.6
1968.....	621.7	415.4	66.8	76.4	12.3
1969.....	664.2	450.2	67.8	81.5	12.3
1970.....	698.9	487.1	69.7	87.8	12.6
1971.....	775.9	539.4	69.5	96.4	12.4
1972.....	899.1	608.2	67.6	108.3	12.0
1973.....	1,014.2	720.2	71.0	121.7	12.0
1974.....	1,171.2	850.1	72.6	139.4	11.9
1975.....	1,277.5	975.5	76.4	144.3	11.3
1976.....	1,592.9	1,098.6	69.0	160.4	10.1

<sup>1</sup> For some States, fiscal-year data converted to calendar-year data.

<sup>2</sup> Disregards dividends to policyholders but allows for premium discounts.

<sup>3</sup> Excludes payment of supplemental pensions from general revenues.

<sup>4</sup> Excludes loss-adjustment expenses for certain competitive State funds before 1964. Includes administrative expenses financed through appropriations from general revenue, generally not separable.

Source: *Spectator: Insurance by States*, annual issues; *Argus Casualty and Surety Chart*, annual issues; and State reports.

premium income—taxes, for example, and administrative expenses absorbed by other government departments.

## State Administrative Costs

In addition to the benefit payments and the costs of operating the insurance programs that pay benefits, workers' compensation programs entail another cost—the expense of maintaining State agencies that supervise the insurance companies, adjudicate contested claims, and exercise enforcement powers necessary to ensure compliance with the law.

Table 12 shows that the expenses of the State administrative agencies are small in relation to the overall magnitude of program costs. In 1976, administrative expenses were \$94 million or about 1 percent of the less than \$10 billion in premiums attributable to employers in the 41 States for which administrative cost data were available. Furthermore, the amount of money

**Table 12.—Administrative costs of State agencies, by type of financing, fiscal years 1950–76<sup>1</sup>**

[Amounts in millions]

Fiscal year	Total administrative costs	Financed through legislative appropriations		Financed through assessments on carriers	
		Amount	Percent	Amount	Percent
1950.....	\$12.4	\$4.6	37	\$7.8	63
1951.....	12.9	4.8	37	8.1	63
1952.....	14.1	5.1	36	9.0	64
1953.....	15.5	5.3	34	10.2	66
1954.....	16.1	5.6	35	10.5	65
1955.....	16.7	5.8	35	10.9	65
1956.....	17.3	6.0	35	11.3	65
1957.....	19.1	6.5	34	12.6	66
1958.....	21.1	7.4	35	13.7	65
1959.....	23.3	7.7	33	15.6	67
1960.....	23.9	8.1	34	15.8	66
1961.....	24.9	8.7	35	16.2	65
1962.....	26.3	9.3	35	17.0	65
1963.....	28.8	10.6	37	18.2	63
1964.....	30.1	10.8	36	19.3	64
1965.....	32.3	12.1	37	20.3	63
1966.....	35.6	13.3	37	22.3	63
1967.....	40.4	15.2	38	25.2	62
1968.....	43.6	16.0	37	27.6	63
1969.....	49.1	18.8	38	30.3	62
1970.....	53.9	20.0	37	33.9	63
1971.....	58.4	20.1	34	38.3	66
1972.....	66.8	22.4	34	44.4	66
1973.....	72.1	24.5	34	47.6	66
1974.....	78.7	27.0	34	51.7	66
1975.....	87.5	32.4	37	55.1	63
1976.....	94.1	34.4	37	59.7	63

<sup>1</sup> Includes the District of Columbia. Excludes States with exclusive funds (7 States through 1965, 6 States thereafter), where the task of administering the law is generally merged with that of providing insurance protection. Excludes the Federal system and 4 States where the laws are court-administered. Before 1960, excludes Alaska and Hawaii. Relates to expenditures of State administrative bodies in supervising operations of insurance carriers and in exercising adjudicative and enforcement powers.

Source: Compiled from State budget, finance, and treasury documents and annual reports of State administrative agencies.

spent on program administration in relation to premiums written has slowly and irregularly gone down since 1959. In 1959, administrative expenses were 1.25 percent of premiums but fell below 1 percent in 1975 and went down again to 0.85 percent in 1976. (Cost data in table 7 are for all States, but administrative expenses are available for just 41 jurisdictions. Administrative expense/cost relationships from tables 7–11 are understated therefore but useful for examining broad trends.)

Only part of the amount spent for State agency administration represents costs over and above the employer costs already included in premiums. As indicated in table 12, about \$60 million of the 1976 total was financed by assessments on insurance carriers and already included in the amounts shown for premium payments. The remaining \$34 million was expended from general revenue funds and represented an addition to program costs. Twenty-two States relied exclusively on general revenue financing and 19 on assessments. The administrative expenses of States not in either of these two groups were not identifiable.

For many years, State administrators and national

study groups have recommended the financing of State administrative costs by assessment rather than by legislative appropriation.<sup>18</sup> This method provides funds on a regular and predictable basis and better assures adequate staffing to fulfill agency responsibilities. On the average, State workers' compensation agencies financed by assessments have larger operating budgets in relation to benefits paid than do States that depend on appropriations. In 1976, the ratio of administrative expenses to benefits paid was 3.0 percent in States funded by assessments, compared with 1.1 percent in States that obtained their funds from general revenue appropriations. In addition, data for 1974 on the ratio of administrative expenses to benefits indicates that 13 of the 21 States with a ratio at or above the 1.5-percent median were classified by the Social Security Administration as assessment States.<sup>19</sup>

The proportion of assessment States has been stable for many years at less than one-half, as has the proportion of administrative expenses attributable to these States—almost two-thirds. Two large States have recently changed their method of financing administrative expenses, one in each direction. In 1976, Pennsylvania switched from general revenue financing to assessments on premiums, but Texas changed from an assessment basis to appropriations. Texas now follows a procedure similar to that used in a number of other States. Under this procedure, the State collects an assessment and deposits the proceeds into the general revenues of the State. The workers' compensation agency budget is then financed from legislative appropriations not related to the amounts collected through the assessment.

## Other Issues

The stated purpose of workers' compensation is to provide income replacement, without regard to fault, to workers who suffer work-related injury or illness. Implied is a program that delivers prompt, adequate compensation in the event of such injury or illness. Current programs, however, particularly in cases of severe disability, are characterized by a high degree of uncertainty as to whether disabled employees will receive benefits and the amount that will be received. Lack of effective administration of claims may be at the heart of the problem. Contested cases and compromise and release settlements are two interrelated features of present-day workers' compensation programs

<sup>18</sup> See *Workers' Compensation: Is There a Better Way*, Report to the President and the Congress of the Policy Group of the Interdepartmental Workers' Compensation Task Force, January 19, 1977, page 20.

<sup>19</sup> See John J. Lewis, *An Analysis of State Workmen's Compensation Activities* (forthcoming report for the Interdepartmental Workers' Compensation Task Force).

that act to diminish the adequacy of benefits. Both stem at least in part from the way claims are administered.

Most contested cases generally relate to the coverage of a particular disability under workers' compensation or to the extent of disability and the resultant level of benefit payment associated with the degree of disability claimed by the worker. In a sample of closed cases throughout the United States in 1975 one-fifth had been contested.<sup>20</sup> One-third to one-half of the serious cases involving permanent, partial, and total disability or death were contested.

At the end of 1977, all States but Tennessee provided full coverage of occupational diseases rather than relying on a list or schedule of covered diseases. With a few exceptions, medical care for occupational disease is generally unlimited or on the same basis as for accidents. At least seven States have limits on the duration of benefits or dollar amounts payable for medical care of occupational disease, but in each instance benefits can be extended under specified conditions. As recently as 1969, 17 States restricted protection for disease-related disability to a schedule of coverage.

In spite of current extensive statutory protection, disability from occupational disease represents a continuing, complex, unsolved problem for workers' compensation programs. Because occupational diseases may often take years to develop and because more than one causal agent may be involved in their onset, the work-relatedness of disabilities from disease often is much less clear cut than disabilities stemming from injury. The role that the workplace has in the incidence of lung diseases, radiation sickness, various cancers, and disability from other nontraumatic ailments suffered by American workers has received increasing attention in the past several years.

In 1976, the Interdepartmental Workers' Compensation Task Force held a conference devoted to occupational disease and workers' compensation. Because of the importance of this issue and the suspected magnitude of disability from occupational disease,<sup>21</sup> Congress charged the Department of Labor with responsibility for a major research program. Information already available from research conducted for the Interdepartmental Task Force<sup>22</sup> suggests, in the following tabulation, the

Item	Percent	
	Injury	Occupational disease
Claims contested.....	9.8	62.7
Reason for contesting:		
Compensability.....	20.6	72.5
Percent of disability.....	55.8	12.0
Other.....	23.6	15.5
Awards initially contested.....	10.0	60.0

magnitude of the problems associated with occupational disease cases in comparison with injury cases.

Other forms of income replacement available when workers cannot work because of employment-related injury or disease should be mentioned here to provide some perspective and better understanding of the role of workers' compensation programs.

Some workers may be eligible for benefits under certain public programs not specifically designed to aid victims of work-related disability: Social security program, veterans' pensions, the supplemental security income program, and others. Furthermore, some employees may receive other forms of compensation from employers, such as sick leave to use during waiting periods or in place of workers' compensation. Some workers not covered by workers' compensation laws may receive compensation for work-related disability through actions against their employers. In particular, railroad workers in interstate commerce and seamen in the United States Merchant Marine are covered by statutory provisions for employer liability rather than by a workers' compensation law.

Although workers' compensation is established on a no-fault principle and prohibits legal suits against employers where disability is covered by the program, employees may bring so-called third-party actions. One type of third-party action—product liability suits—has been the subject of attention of government inquiry. A recent study of product liability reported \$86 million paid for work-injury-related product liability cases closed in 1976-77.<sup>23</sup> The magnitude of these payments, if occupational disease cases were included, might be much larger. Some industrial activities may have widespread effects on workers—manufacturing processes, for example, that add particulates to the air in the workplace contributing to the incidence of lung disease or cancer.

## Summary

The bulk of the workers' compensation system was enacted in the 11 years from 1908 to 1919, involving 43 States and the programs for Federal and District of

<sup>20</sup> See Cooper and Company, *A Survey of Workers' Compensation Closed Claims* (forthcoming report for the Interdepartmental Workers' Compensation Task Force).

<sup>21</sup> According to the *President's Report on Occupational Safety and Health, 1972*, at least 390,000 new cases of disabling occupational disease occur each year and as many as 100,000 deaths from this cause.

<sup>22</sup> Thomas C. Brown of the Interdepartmental Workers' Compensation Task Force, "Denial and Compromise of Workers' Compensation Claims for Occupational Disease" (paper presented at the annual meeting of the American Public Health Association, October 16, 1978).

<sup>23</sup> Task Force on Product Liability, *Final Report*, 1978.

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Columbia government workers. New State laws establishing programs and amendments improving these laws proceeded at a relatively slow pace from 1920 up to 1970. The 1970's witnessed a major wave of legislation that added workers to coverage, expanded the scope of medical and occupational disease protection, raised benefits, and reduced or eliminated restrictions on benefit eligibility.

All but three States now provide compulsory workers' compensation coverage, but as recently as 1968 coverage was still elective in 23 States. Size-of-firm restrictions have been eliminated in 12 States since 1968, and the number of jurisdictions offering coverage to workers in firms of one or more workers has thus risen to 40. From 1969 to 1977, the number of jurisdictions in which the statutory benefit wage-replacement rate for temporary total disability was two-thirds or more rose from 29 to 49.

One statutory change has dramatically affected the ability of benefits to keep pace with the inflationary increase in wages: The institution of flexible benefit provisions that automatically raise the maximum weekly amount as wages (or prices) rise. Before 1970, only five States had this type of provision. By the end of 1977, 37 additional States had added this feature, bringing the total to 42. Another improvement during the same period was the removal by 21 States of limits on the duration of benefits and/or aggregate benefits that surviving widows could receive. By the end of 1977, only 18 States had such restrictions on survivor benefits.

As a result of these improvements in workers' compensation programs, close to 9 out of 10 workers had protection against work-related disability by 1976. Benefit payments under workers' compensation programs in 1976 totaled \$7.6 billion. A single worker earning the average wage in his State at the end of 1977, who was disabled for 3 weeks, was entitled to a workers' compensation benefit that replaced on the average 58 percent of his weekly wage; for a worker with three dependents, the nationwide average replacement rate was 60 percent. At the end of 1969, replacement rates paid by workers' compensation benefits were

44 percent for the single worker and 48 percent for the worker with three dependents.

Program costs rose substantially during 1970-76, commensurate with the growth in benefit levels. In 1976, slightly more than \$11 billion was paid by employers for workers' compensation premiums. This amount represented 1.47 percent of payroll, an increase of more than one-third from the 1.08 percent in 1969. Loss (benefit/cost) ratios remained at levels well within the range of those maintained throughout the 1950's and 1960's. The loss ratio based on benefits paid was 50.8 percent in 1976 for private carriers and 69.0 percent for State funds. Because of inflationary effects, however, ratios based on incurred losses were substantially higher. For 1976, this loss ratio for private carriers was 78.7 percent.

In some respects the gains made in State workers' compensation programs serve to emphasize their remaining shortcomings. None of the States has yet adopted all 19 standards set out by the National Commission on State Workmen's Compensation Laws in 1972 as essential to an effective workers' compensation program. Issues raised by the National Commission, and later reemphasized by the Interdepartmental Workers' Compensation Task Force, that remain unresolved are:

1. Major gaps remain in protection for disability from occupational disease.
2. Permanent partial disability cases continue to present such problems as inappropriate payments for the level of disability, too many contested claims, and a large number of compromise-and-release settlements.
3. Many State agencies provide passive and insufficient administrative supervision of the program.

In short, widespread, significant improvements have occurred in the workers' compensation programs during the 1970's. It is not yet clear, however, whether and how the remaining problems will be solved within the current system.